

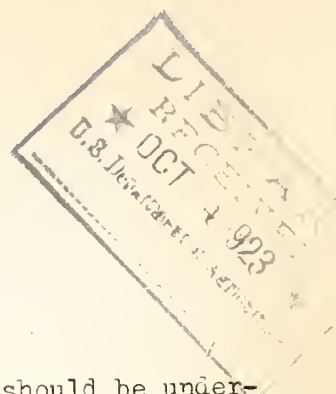
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UNITED STATES DEPARTMENT OF AGRICULTURE  
BUREAU OF BIOLOGICAL SURVEY



POISONING MAGPIES

When control measures are necessary against magpies they should be undertaken during the winter months, when these birds are hard pressed for food. At this time, especially after a heavy snowfall, magpies may be readily decoyed to carcasses or other carrion. A considerable area should be covered in control campaigns, with the aim of reducing the breeding population of the subsequent season.

A method that has met with considerable success in the winter months involves the use of tallow or lard. Powdered strychnine alkaloid at the rate of about 1/8 ounce to a quart of melted tallow or lard is stirred into the liquid grease, and while cooling it should be agitated from time to time to prevent the settling of particles of poison. This should be continued until the grease becomes thickened and will hold the poison in suspension. It should then be allowed to harden, after which it may be cut or broken into pieces about 1/4 inch square. Baits should be placed sparingly about or on decoy carcasses, or a few may be impressed on the tops of fence posts where magpies habitually perch. These baits have the advantage of disintegrating in warm weather, thus becoming harmless to other birds or mammals.

Grain baits may be used if precautions are taken to prevent the killing of other birds. The use of whole corn as a bait, which is perfectly acceptable to magpies, will prevent the killing of small seed eaters. While chickens possess a marked immunity to strychnine and can eat a certain quantity in baits without bad effect, other poultry, especially young turkeys and ducks, must be kept away from baited areas. Grain baits should be used sparingly about carcasses or in places where magpies habitually congregate, and should be replenished from day to day as they are picked up. When once the flock of magpies has been eliminated, surplus grain should be cleaned up.

An effective grain bait may be prepared according to the following formula:

Whole corn (maize) .....	20 quarts
Strychnine alkaloid (powdered).....	1 ounce
Starch .....	2 tablespoonfuls
Water .....	1-1/2 pints

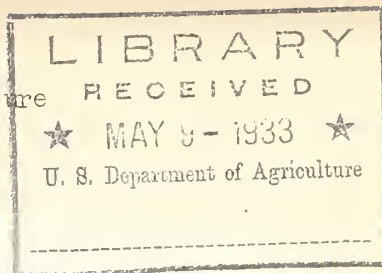
Put the starch and strychnine into the water and heat to boiling, stirring thoroughly after the starch begins to thicken. Pour the mixture over the corn and stir until every kernel is coated. The seed may then be spread out and dried. The special strychnine (25%), prepared and used by field agents of the Biological Survey, may be substituted for the strychnine alkaloid, but allowance should be made for the fact that this preparation bears one-fourth the strength of the alkaloid form.

CAUTION: Keep all poison containers PLAINLY LABELED and OUT OF REACH of irresponsible persons and livestock. Pick up or destroy uneaten baits.



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CONTROL OF MAGPIES

The common magpie, a characteristic bird of the plains and mountains of the West, exerts an economic influence not greatly different from that of the crow in the East, but a study of its food habits indicates that it surpasses the crow as an insect eater. Destructive weevils, caterpillars, and grasshoppers characterize its insect food, which forms nearly 36 percent of the bird's annual diet. The magpie also must be credited with the destruction of a certain, though limited, number of small rodents; and it is beneficial also as a carrion feeder. On the other hand the magpie has outstanding faults. It sometimes destroys poultry and beneficial wild birds and their eggs; and it has at times become a pest on cattle, sheep, and hog ranches by attacking sick, weak, or injured animals.

At times magpies in a locality become so bold or gather in such great numbers that their faults become emphasized to the degree that control is warranted. As in most if not all problems of bird control, the need for drastic action against the magpie is confined to local areas where one or another of its faults has thus become unduly prominent. Over much of its range, where it appears in moderate numbers, the bird is not an outstanding agricultural pest, nor is it a serious menace to other wild birds, and there are times when its influence may even be beneficial. The reasoning that the magpie, or any other bird, is a proper subject for control at all times because it is sometimes objectionable, is wholly fallacious. As time goes on and studies of the economic relations of birds advance, it becomes more and more apparent that the real need of control is primarily local. To help meet such local needs this circular has been prepared.

DESTROYING MAGPIE NESTS.

During the breeding season of the magpie, the time when most frequent damage is inflicted on poultry, the systematic destruction of the birds' nests with their eggs or young will aid in local control. Persistent raids by magpies on a particular poultry yard usually can be traced to a pair or two with young near by. The elimination of these, preferably by the shotgun, will put a stop to the trouble.

POISONING

Poisoning has been found the most economical and effective method for the control of magpies. Resort to poison, however, from its very nature, involves a problem to which thorough consideration must be given. This is the possibility that harmless or beneficial bird and mammal life may be endangered through careless distribution or improper choice of baits. The same difficulty presents itself in practically every effort at bird control, and it is only by the use of proper methods that the killing of innocent species may be prevented. Safeguarding these is necessary not only on strictly economic grounds, but also because in many cases to destroy them would violate Federal or State laws that afford them protection. Of importance also is the danger of killing valuable dogs and even livestock through carelessness in control operations. Local or State regulations governing the sale and distribution of poison should be scrupulously observed.



Poisoning campaigns against magpies, where required, should be undertaken during the winter months, a time when these birds have concentrated on favorable feeding grounds and when snowfall has curtailed their natural food supply.

### Carrion Stations

The practice of using a lure in the form of carrion of some kind about which baits are placed should be adopted, but the carrion should serve as an attraction only and should not be poisoned. The poison may be offered in suitable baits (see below) that may be removed or destroyed when operations are brought to a close. A beef or horse carcass may be divided into portions sufficient for 15 or 20 magpie bait stations, and smaller carcasses into a correspondingly smaller number. The exposed body of a chicken or rabbit will be found just as readily as that of a large mammal, and the smaller carcass can be easily removed after it has served its usefulness or when there is need to relocate the station. It will be necessary to inspect regularly a station consisting of the body of a small mammal or chicken lest the magpies consume it entirely and the station be without a lure. All carcasses, large or small, should be opened or have a section of the skin removed in order that the birds may gain ready access to the flesh. When the decoy has been exposed to a drying atmosphere or has been frozen and the flesh made difficult of removal, a few fragments of suet scattered about the station will tend to keep the feeding ground attractive.

Locations for Carrion Stations.--Advantageous points for carrion stations may be found along fence lines around cattle corrals and pastures, or near railroad tracks, areas to which magpies are partial. The vicinity of streams also affords excellent sites for stations, provided the more heavily timbered areas that harbor numbers of small birds are avoided. Barron sand bars of shallow streams, dotted with driftwood, afford good sites, as do also small isolated groups of cottonwoods.

Frequent shifting of stations is necessary, especially in periods of fair weather, when the attractiveness of a station is none too great. (It is for this reason that small carrion stations are preferable to those that are difficult to move.) During fair, warm weather, a station will retain its maximum attractiveness for about three days; during cold weather it will last longer. A shift of only a few rods, when accompanied by a new arrangement of carrion and baits, often will make a station effective over another period of time, varying with weather conditions.

### Suet Baits

Beef suet makes excellent bait. It is easy to obtain, can be handled conveniently, will keep for a long time in cool weather, and is acceptable to magpies. An effective bait can be prepared on the basis of the following formula:

Ground suet..... 1 pound.  
Strychnine alkaloid (powdered)...  $\frac{1}{2}$  ounce.  
Glycerine..... A generous tablespoonful.

In preparing this bait, the operator should first put the fat through a meat grinder having a fine knife. Power grinders in which the fat is ground into particles about an eighth of an inch in diameter are well suited for the

purpose. The first grinding may be done at the market where the suet is purchased. Subsequent mixing and grinding can be done with an ordinary household grinder, some types of which turn out a product similar to that of the power machines. The household grinders can be thoroughly cleaned by using a plentiful supply of a boiling-hot soap solution (to melt and dissolve all the fat, which carries particles of strychnine) and then rinsing the grinder with boiling water.

A pound of suet will produce, when ground, slightly more than a pint of suitable magpie bait. If ground when cool the material will break up readily into small particles. This should be spread out in a thin layer preparatory to adding the powdered strychnine. The poison may be distributed over the suet by using an old salt shaker, or a can the cover of which has been perforated with small holes. After the poison has been evenly dusted over the suet particles, it should be molded into the fat, the warmth of the hands being sufficient to soften the suet if small portions are worked at a time. The object is to embed, if possible, all particles of strychnine into the fat. After this has been done, the fat should be passed through the grinder again and, with it, about  $\frac{1}{2}$  cupful of any red meat to give color to the product. Feeding meat and suet alternately into the grinder in small quantities will insure an even mixture. The second grinding also should be done when the suet is cool, so that the particles will remain more or less separated. As a final step, the glycerine should be added to the suet by a gradual mixing so as to coat the particles of suet with the glycerine. This is done to keep the baits from freezing hard in extremely cold weather.

If a household grinder is not available, or if there is reluctance toward using one for the grinding of poisoned suet, the following procedure may be adopted. The small quantity of red meat called for may be mixed with the ground suet before grinding at the market. The strychnine should be added to the glycerine and the mixture applied, by gentle but thorough stirring, to the particles of suet, which should be kept cool during the process. This short cut in preparation, though workable, is less satisfactory, however, than molding the poison into the fat and regrinding the mixture.

"Suet Block" or "Suet Stick."—Suet baits may be safely exposed in what have been termed "suet blocks" or "suet sticks." These may be made from sections of 2 by 4 into which one or more holes, 2 inches in diameter and  $1\frac{1}{2}$  inches in depth, are bored. A section containing only one hole (suet block) need be only 4 inches long; while others containing several holes (suet sticks) should be of sufficient length to allow spacing the holes at 6-inch intervals. The length of stick should be governed by the number of magpies in the vicinity. With a bait as strong as the one recommended, however, a stick containing four holes will be sufficient for all needs, and often a single-holed block will suffice.

The holes serve as convenient receptacles for the poisoned bait, which should be molded into them rather firmly but not with pressure sufficient to destroy the more or less regular condition of the suet. Special care must be taken not to press the suet too firmly in periods of cold weather, when it may so solidify that even a bird as strong as the magpie may have difficulty in removing particles.

The suet stick may be nailed securely to the top of a tall, strong fence post. Placed in this manner, it furnishes a convenient perch on which the birds may alight, and, when a carrion station is directly beneath, the baits often are seen and taken before the carrion is sampled. These sticks and blocks may be safely attached also to the framework of hay poles and to the roofs of buildings to which poultry do not fly.

### Grain Baits

Grain baits should be used wherever the suet baits might prove dangerous to valuable insectivorous birds. By using whole corn with large-sized kernels, the danger of killing small birds is practically eliminated, and, if the grain is used sparingly, it will have little attraction for livestock. Poultry other than chickens must be excluded from areas poisoned with grain baits bearing strychnine. Domestic chickens, in common with quail, pheasants, sharp-tailed grouse, and prairie chickens, possess a marked immunity to the action of strychnine, and without ill effects can eat considerable quantities of grain baits of a strength great enough to kill magpies.

Since magpie control campaigns can be most effectively conducted in winter, grain baits distributed at that time should be so prepared as to resist dampness and prevent the dissolving or washing away of the poison. Coating with a layer of tallow is one of the most convenient ways of accomplishing this, and, although this involves the addition of animal matter to the bait, the quantity is so small that, when scattered sparingly, the baits will be of little danger to dogs. Such a bait may be prepared in the following proportions:

Whole corn..... 2 quarts.  
Ground beef suet.....  $\frac{1}{2}$  pint.  
Powdered strychnine alkaloid... 1/8 ounce.

The corn and ground suet are placed in a metal container, which is set in a basin of boiling water. This is kept hot while the corn and suet are stirred until the suet is completely melted. The strychnine is then added. After a thorough mixing, the corn is spread out to prevent the kernels from sticking together while cooling.

Grain baits are most effective when distributed about regular feeding grounds of magpies or about carrion stations. Above all, the bait should be used sparingly. The blocks and sticks described for the exposure of suet may be used for the grain baits also.

Once resorted to, control measures against magpies should be conducted energetically and with the object of locally cleaning up the bulk of the birds in the course of five or six days. Daily visits should be made to replenish baits that have been eaten and to remove dead birds that have fallen in the immediate vicinity of the stations. At the close of operations all suet blocks or sticks containing bait and all surplus poisoned grain should be gathered and burned or otherwise safely disposed of.

CAUTION: Keep all surplus poison and poison containers PLAINLY LABELLED and OUT OF REACH of irresponsible persons and domestic animals. All utensils used in the preparation of poisoned baits should be THOROUGHLY CLEANED before being used for other purposes.